

Post-secondary Education in Canada: Meeting our Needs?

EXECUTIVE SUMMARY

OVERVIEW

As the world struggles with the uncertainty of a major economic downturn, the need to ensure that Canadians have the right skills and knowledge for a sustainable economy—now and in the future—is suddenly thrown into high relief.

With jobs becoming vulnerable or disappearing, many Canadians are being forced to rethink their future. They are asking themselves, “What can I do now? Do I have the skills I need?”

Post-secondary education (PSE) plays a key role in developing people’s potential and cultivating Canada’s human infrastructure, both of which are necessary for the country’s success.

Post-secondary education (PSE) refers to the skills and knowledge acquired through academic, technical and vocational courses and programs provided by universities, colleges and trade schools, including apprenticeships. Each component of the PSE sector makes a vital contribution to Canada’s social and economic development. All three are necessary to ensure Canada’s continued progress and must be valued equally.

The current downturn coincides with a rising demand for post-secondary graduates in Canada’s labour market—roughly two-thirds of all job openings in this country now require some type of post-secondary credential. Add to this mix the following two factors: Canada’s population of children (younger than 15 years old) has declined over the last decade, and the Baby Boom generation is entering retirement.

The sum result of this is that even as thousands of workers in the manufacturing sector are losing their jobs, thousands of jobs in other sectors sit unfilled. It is unclear whether Canada will have sufficient college graduates to meet demand by 2015. Without appropriate action, we will continue to have jobs without people and people without jobs. These converging circumstances make issues related to PSE access, participation and completion even more pertinent to Canada’s future as a prosperous, vibrant and equitable democracy.

The Canadian Council on Learning’s third annual report on the state of PSE in Canada offers a much-needed perspective for informed public discussion about the future of PSE in this country and how the sector can best help Canadians to find success.

Below is a summary of some key findings from *Meeting our Needs?*

KEY FINDINGS

Chapter 1: From Access to Attainment

Chapter 1 provides data and discussions on access, persistence and completion of PSE in Canada. Included is an examination of financial planning, barriers to participation and reasons for not completing PSE.

Highlights:

- 85% of 15-year-old Canadians expect to attend university or college.
- 80% of parents with children under the age of 18 had either saved or were intending to save for their children’s post-secondary education.
- Parents of potential PSE students (under the age of 18) do not have a realistic picture of how PSE is financed:
 - 40% of parents expected their children to receive scholarships based on academic performance, while only 15% of PSE students actually received this type of funding; and
 - the proportion of students who relied on financing from banks, personal loans or credit cards is 2.5 times higher than parents expected.
- Among 24 OECD countries, Canada had the third-highest proportion of 20- to 24-year-olds who were either attending school or had completed PSE.
- Yet, more than one million Canadians aged 25 to 44 have not completed high school and approximately 1.6 million 16- to 25-year-olds have less than Level 3 literacy, the standard considered the minimum to function effectively in a knowledge-based society such as Canada.

EXECUTIVE SUMMARY

Chapter 2: Under-representation and Gender Disparities in PSE

Chapter 2 examines PSE access, participation and completion through the multiple lenses of under-represented populations (rural, Aboriginal, low income, low parental education levels) and gender difference.

Highlights:

- In 2006–2007, the high-school dropout rate for 20- to 24-year-olds living in small towns and rural areas was almost twice the rate for the same age group living in large cities (14.9% versus 8.3%).
- Students from low-income families are less likely to pursue a post-secondary education. Only 58.5% of 18- to 24-year-olds from families earning less than \$25,000 annually participated in PSE in 2006, compared to 80.9% of youth of the same age from families with an income over \$100,000.
- The 2006 Census found that almost half of the Aboriginal population in Canada is under the age of 25. Among the 20- to 24-year-old Aboriginal population, 40.3% had not completed high school, compared to 12.5% in the non-Aboriginal population.
- The Census results show an improvement in the overall levels of post-secondary educational attainment within the Aboriginal population.
- Aboriginal people were as likely as their non-Aboriginal counterparts to have obtained a college or trade qualification.
- 7.7% of the Aboriginal population had attained a university credential, while 23.4% of the non-Aboriginal population had university attainment.
- Clear differences are evident between the genders in their PSE behaviours: 90% of trades registrations and graduates are male, while 61% of university undergraduate completions are female. In the population aged 25 to 34 with any type of PSE completed, 54% are female and 46% are male. This is the reverse of the figures for the population aged 55 to 64.

Chapter 3: Lifelong Learning and PSE

Chapter 3 focusses on PSE programs and courses—or formal education—within the context of the lifelong learning continuum. It examines adult participation in education taken through PSIs, seniors in PSE, adult literacy, withdrawals from Canada's Lifelong Learning Plan and the partnership role of PSIs in workplace learning.

Highlights:

- Canada's seniors are becoming lifelong learners. A 2006 survey by the Canadian Network on Third Age Learning revealed that more than 60,000 Canadians over the age of 65 had participated in credit and non-credit courses, seminars, workshops and learning tours being offered by colleges, universities and other educational institutions in Canada.
- Withdrawals from Canada's Lifelong Learning Plan, a federal program established to encourage adult Canadians to participate in formal education by using RRSP savings for learning, increased by 17.5% between 2002 and 2004.
- Although Canadians are more educated than ever before, numerous surveys of business leaders indicate that employers are dissatisfied with their employees' so-called soft skills (including teamwork, communication skills and self-motivation) and with some of the skills necessary for their jobs (including the management of information, use of numbers and problem solving). As a solution, many businesses are turning to post-secondary institutions for specific courses that meet these particular needs. This presents an opportunity for growth in the PSE sector.
- The participation rate and number of hours spent in formal job-related training are both on the rise in Canada, particularly among middle-aged and older workers. Between 1997 and 2002, participation rates in formal job-related learning among adults aged 45 to 54 rose by six percentage points to 33.8%. In addition, the average number of hours that 55- to 64-year-olds spent in job-related training more than doubled. In 2002, 4.8 million employed adults between the ages of 25 and 64 (35% of the workforce) took part in job-related education or training.
- Approximately 28% of the working-age population wanted to pursue training in 2002 but could not due to financial constraints.
- If adult participation in post-secondary learning is to be enhanced, the PSE sector must be responsive to the needs of the labour market. To accomplish this requires ongoing and effective research and communication with the labour market. In addition, adult learners have life circumstances and attitudinal perspectives that are different from the average 18- to 24-year-old student and need to be taken into account.

Post-secondary Education in Canada: Meeting our Needs?

EXECUTIVE SUMMARY

Chapter 4: Affordable and Sustainable PSE

Chapter 4 addresses the financial aspects of PSE (affordability) and the sector's capacity to meet demand for PSE (sustainability). In particular, this chapter includes an examination of public and private investments in PSE, student debt, student fees, student debt repayment, and the sector's capacity (i.e. institutional capacity and the availability of teaching staff).

Highlights:

- In 2005, Canada placed 22nd of 26 reporting countries in the share of public expenditures on PSE. At 55.1%, Canada's share was well below the OECD average of 73.1% and the EU average of 82.5%.
- In 2005-2006, nearly 350,000 full-time students received close to \$2 billion in financial aid from the Canada Student Loans Program.
- Undergraduate tuition fees increased 36.4% between 2000–2001 and 2008–2009. Since 1996–1997, the rise in undergraduate tuition costs has exceeded the rise in the Consumer Price Index every school year except 2005–2006.
- Both the number of students borrowing and the average amounts they borrowed have increased substantially in recent years.
- Nearly half (49%) of full-time university educators were over the age of 50 in 2004–2005, compared to 25% of Canada's total workforce.

Chapter 5: Innovation, Knowledge Creation and Knowledge Transfer

Chapter 5 recognizes the increasing importance of research and development (R&D) as a fundamental support for competitiveness and economic growth, which in turn affect the well-being of individuals and the society in which they live. This chapter looks at the pivotal role the PSE sector plays in carrying out Canada's R&D, from funding and activity expenditures to R&D personnel and the knowledge they create.

Highlights:

- Funding of R&D in the higher education sector increased by 149.8% between 1996 and 2007, reaching \$4.8 billion in 2007.
- One-third of all R&D activity expenditures in Canada occurs in the PSE sector.

- Expenditures related to R&D activities performed in the higher education sector are more than double the OECD average (36% vs. 17.1%) and surpass the EU average of 22.1%.
- At 47.8%, the business sector provides the highest level of funding for R&D within Canada, but is well below the OECD average of 62.7% for that sector.
- The overall number of Canadians graduating from university with advanced degrees has increased in recent years, with attainment of master's degrees rising by 54.5% and doctoral degrees increasing by 13% between 1995 and 2005. However, over this same period there was a decline in the number of doctoral degrees in engineering and computer science, and in both master's and doctoral degrees in math and physical sciences as a share of total degrees.
- In 2006, Canada ranked 20th out of 30 OECD countries in the proportion of science and engineering degrees relative to all new degrees. Canada also ranked 20th in the proportion of PhD graduates in science and engineering.

Chapter 6: Active, Healthy Citizenry

Available data show that individuals with post-secondary education are more likely to be healthy, active and engaged in their community. To assess the direct effects of post-secondary education, researchers are developing indicators to measure the extent to which PSE promotes health, civic and social engagement, and standard of living—but this is a long and rigorous process. In the absence of agreed-upon indicators, Chapter 6 must reiterate some information from earlier CCL reports—supplemented with recent studies and projects, notably the OECD project, "Social Outcomes of Learning (SOL)".

Highlights:

- In 2004, for every 100 voters with a university degree, there were 94 voters with high school and 88 with less than high school.
- In 2004, 74% of individuals without a high-school diploma made a charitable donation, compared with 93% of those with a university degree.
- In 2005, 66.9% of Canadians with a PSE qualification reported being in excellent or very good health versus 42.9% of those without a high-school diploma.
- On measures of life satisfaction in 26 OECD countries, there was an average spread of 10 percentage points between individuals with low levels of educational attainment and those with high levels of attainment. In Canada, the difference was five points.

EXECUTIVE SUMMARY

Chapter 7: A Skilled and Adaptable Workforce

Canada's prosperity is dependent on its ability to produce a workforce with the skills that society needs. To help understand how Canada is meeting this challenge, Chapter 7 examines the labour-market outcomes for PSE graduates, how the supply of PSE graduates matches the labour-market demand for PSE attainment, and how PSE credentials are distributed according to field of study (e.g., are too many or too few teachers being trained to meet the expected demand?).

Highlights:

- Between 1990 and 2007, the number of jobs requiring PSE graduates almost doubled. Only half as many jobs were available for those who had not completed high school.
- In the decade leading up to 2015, 5.5 million job openings will result from new job creation and retirements. Approximately 1.42 million university graduates will be required, while 2.02 million graduates will be needed from the college sector or apprenticeships.
- Younger generations are increasingly choosing university as their preferred PSE option; 28.9% of the population aged 25 to 34 (new entrants to the labour force) had university education in 2006, compared with 18.3% of the population aged 55 to 64.
- Younger Canadians are less likely to pursue post-secondary studies in the trades. In 2006, 10.4% of those aged 25 to 34 had a trade certificate, compared with 13.1% of the population aged 55 to 64.
- According to the 2006 Census, 7.2% of the trades' population and 8.2% of the college-educated population were not born in Canada and did not earn their certificates or diplomas in Canada. In 2006, 21.5%—or more than one in five university graduates living in Canada—were immigrants with foreign credentials.
- 20% of the university-educated population in Canada had prose literacy skills below Level 3, the internationally accepted level required to cope in a modern society.
- Unemployment rates for individuals without a high-school diploma were three times higher than for those with a university degree.
- In 2005, individuals aged 40 to 59 with a university degree earned, on average, twice the income of those who had not completed high school.

Chapter 8: Quality Assurance in PSE

Quality assurance is a process to assess the quality of a course, program or PSE institution. Understanding quality in Canada's \$30-billion PSE sector is an issue of accountability to students, families and all levels of government with investments in the sector. It is also important for identifying where improvements are needed in order to maintain quality for future generations of students. Chapter 8 defines quality assurance and discusses current approaches to its measurement and existing indicators, including student surveys, which are often used to assess the quality of the PSE experience. The chapter also addresses international advances in the field of quality assurance.

Highlights:

- Quality assurance is a serious concern at the international level. For example, the Bologna Process—a collaborative effort among 46 countries, including all 27 European Union members and extending to countries such as Norway, Switzerland, and the Russian Federation—has the goal of establishing a European Higher Education Area (EHEA) by 2010, which will address issues of quality and mobility in the PSE sector of those countries.
- Even though all three elements of publicly funded PSE in Canada (colleges, trades and universities) are engaged in evaluating and measuring aspects of quality in education, Canada does not have a comprehensive and coherent approach to quality assurance that has the confidence of all PSE stakeholders.
- Results from the National Survey of Student Engagement show that Canadian universities that participated in the survey trail U.S. counterparts in student–faculty interaction, which includes measures such as discussing grades with instructors, receiving prompt feedback, talking about career plans with faculty members and discussing ideas with faculty outside class.
- In 2005, 78% of college students who responded to an online survey believed that all faculty members demonstrated an interest in helping students, while 73% reported that faculty members were available to meet outside of class.
- More than 80% of all apprentices report that they were supervised by a journeyman at all times throughout their workplace training and found that their supervisor took the time required to explain their training and tasks clearly.
- Between 1987 and 2006, university enrolment in Canada increased at three times the rate of faculty increases, 56% versus 19%.